## REMARKS

Favorable reconsideration of this Application as presently amended and in light of the following discussion is respectfully requested.

After entry of the foregoing Amendment, Claims 5-16 are pending in the present Application. Claims 1-4 have been canceled without prejudice or disclaimer. Claims 10-16 are new and find support at least at page 7 line 21 through page 8 line 7, and page 6 line 11 to page 15. Claims 5-8 have been amended, support for which can be found at least at page 6 line 24 through page 7 line 2. No new matter has been added.

By way of summary, the Official Action presents the following issues: Claim is objected to, and Claims 1-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Bottcher et al. (U.S. Patent No. 4,390,745, herein "Bottcher").

## OBJECTION TO CLAIM 1

The outstanding Official Action has objected Claim 1 as containing informalities. As Claim 1 has been canceled, Applicants respectfully submit that this objection has been rendered moot.

## REJECTION UNDER 35 U.S.C. § 102

The outstanding Official Action has rejected Claims 1-8 under 35 U.S.C. § 102 as being anticipated by Bottcher. The Official Action contends that Bottcher discloses all of the Applicant's claim features. Applicants respectfully traverse the rejection.

Applicants' amended Claim 5 recites, *inter alia*, a cold-shrinkable type elastic sleeve that is tube shaped, comprising:

> ... an external semiconductive layer that includes an elastic material and a semiconductive material, ~~and is formed~~ the semiconductive layer being molded around the reinforced insulation layer;

two stress-relief cones, wherein one stress-relief cone is formed at each end of the cold-shrinkable type ~~rubber~~ elastic sleeve; and

two edge-cut sections, each edge-cut section is formed near each of the stress-relief cones by edge-cutting the external semiconductive layer in a direction of a length of the cold-shrinkable type ~~rubber~~ elastic sleeve.

Bottcher describes a tube (4) having an electrically insulating outer layer (5) and an electrically conductive layer (6) which is situated interior and along a length of the tube but does not extend to the open ends (7) and (8).[1] The internal conductive layer (6) is spaced apart from the stress grading layers (9) and (10). Additionally, as shown in Figure 4, a further embodiment is shown having an outer electrically conductive layer (13) continuous along an entire length of the tube (4). In use, the Bottcher tube provides connectivity between two cables so that the stress grading layer (9) and (10) are connected to respective predetermined positions of the tube cables. As can be appreciated, a stress grading layer is provided for each cable, two spaces are needed.[2]

Conversely, in an exemplary embodiment of the Applicants' claimed advancement, a cold-shrinkable type elastic sleeve having a tube shape includes an internal semiconductive layer that includes an elastic material and a semiconductive material. A reinforced insulation layer is formed around the internal semiconductive layer to reinforce the internal semiconductive layer. An external semiconductive layer includes an elastic material and a semiconductive material. The semiconductive layer is molded around the reinforced insulation layer. Two stress-relief cones are formed at each end of the cold-shrinkable type elastic sleeve. Two edge-cut sections, are formed near each of the stress-relief cones by edge-cutting the external semiconductive layer in a direction of the length of the cold-shrinkable type elastic sleeve.

[1] Bottcher, Figure 2, column 9, lines 43-49.
[2] Bottcher, Figure 4.

Bottcher does not disclose or suggest an external semiconductive layer which includes an elastic material and is molded around a reinforced insulation layer as recited in amended Claim 5 or any claims depending therefrom. This is a notable feature of the Applicants' claims.

That is, the material that forms the external semiconductive layer is material produced in small amounts at a time. This leads to a non-negligible fluctuation in quality, lot by lot, which is caused for example by flowability of the material upon molding. Thus, when molding conditions are strict, failure to conform to size tolerance, or, molding failures such as cracks at the fitting portion of the mold occur frequently.

When molding failure occurs in the external semiconductive layer, products are not acceptable as a final product in many cases, which inevitably results in rejection of not only the external semiconductive layer but the entire product. Further, since the external semiconductive layer provides electric properties such as dielectric breakdown strength of electrical cable joints, high technical skill will be required for adjusting or mending even a slight molding failure. Also, in the case of insufficient mending or adjustment, expansion or elongation upon expansion by use of carrier pipe or upon use causes rupture or fission to grow in the cracked portions. In worst cases, occurrence of dielectric breakdown is expected. Therefore, from the viewpoints of increasing the fabrication yield of the cold-shrinkable type elastic sleeve and decreasing production cost thereof, molding failure of the external semiconductive layer must be evaded.

In the present claimed advancement as noted above, to cope with this, an edge-cut section is provided at each end of the sleeve. As a result, the external semiconductive layer is rendered simple in shape (in the form of a simple cylinder). Because of its simplicity in shape, molding conditions become less crucial. This prevents the occurrence of molding failure when the materials for forming the external semiconductive layers are provided from

different lots. Therefore, according to the present claimed advancement, the productivity of the cold-shrinkable type elastic sleeve is enhanced as a sleeve with stable quality is obtained.

With specific regard to Claims 4 and 8, the Official Action notes at page 3,

> Bottcher et al. does not disclose non-uniformities in thickness; Bottcher et al. therefore disclose an external semiconductive layer having a substantial uniform thickness".

Based upon this statement, it appears though the Official Action is taking the position because Bottcher does not disclose a specific feature, it discloses the opposite feature by default. Applicants respectfully submit that this rationale is deficient under 35 U.S.C. § 102. Should such a rejection be maintained in a subsequent action, Applicants respectfully request the Examiner to identify support in the MPEP for rejecting the Applicants' claims based upon what is not disclosed in a 102 reference.

Accordingly, Applicants respectfully request the rejection to Claims 1-8 under 35 U.SC. § 102 be withdrawn.

## NEW CLAIMS

New Claims 10-16 recite further aspects of Applicants' claimed advancements which are neither disclosed nor suggested by the art of record.

Claim 10 recites that the cold-shrinkable type elastic sleeve has two edge-cut sections and that the cold-shrinkable type elastic sleeve is supported on a disassemblable carrier in an expanded state.

That is, often times users instruct the positioning of the edge-cut section on which terminal part of the cold-shrinkable type elastic sleeve for use in insulation joint of electrical cables is provided. The cold-shrinkable type elastic sleeve of the present claimed advancement can cope with both types of instructions, right had side or left hand side by a single type of sleeve since there is an edge-cut section at each end of the sleeve.

To be more specific, the joint portions of electrical cables are often held in a narrow man-hole. When the joint portion of an electrical cable is fitted with a cold-shrinkable type elastic sleeve, the disassemblable carrier is to be removed. Since generally man-hole are very narrow, the operation of removing the disassemblable carrier, which keeps the sleeve in an expanded state until it is used, is very difficult. In addition, manufacturers designate the position of the edge-cut section. Under the circumstances, in the case of the conventional cold-shrinkable type elastic sleeve that has a single edge-cut section, provision of two types of sleeves are necessary; one having the edge-cut section on the same side as that on which the disassemblable carrier is to be removed and the other having the edge-cut section on the side opposite to that on which the disassemblable carrier is to be removed.

On the contrary, provision of the edge-cut section at each end of the sleeve, i.e., on the same side as and on the side opposite to that on which the disassemblable carrier is to be removed, makes it unnecessary to take into consideration on which side the edge-cut section is to be provided. In other words, when the cold-shrinkable type elastic sleeve is attached to the joint portion of electrical cables, the edge-cut sections can be arranged in either direction.

Accordingly, in the case of the cold-shrinkable type elastic sleeve of the present claimed advancement, only one type of sleeve is sufficient and administration of the cold-shrinkable type elastic sleeve can be made easier and workability of operation of electrical cable joints can be increased.

## CONCLUSION

Consequently, in view of the foregoing amendment and remarks, it is respectfully submitted that the present Application, including Claims 5-16, is patently distinguished over the prior art, in condition for allowance, and such action is respectfully requested at an early date.

Respectfully submitted,

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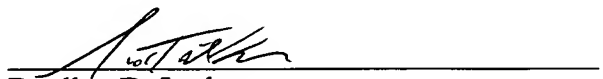

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